PMH60

EFFECT OF BLACK-BOX WARNING ON TIME TO SWITCH FROM ANTIDEPRESSANTS TO ANTIPSYCHOTICS AMONG CHILDREN SUFFERING FROM DEPRESSIVE DISORDERS IN TEXAS

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OBJECTIVES: To examine the effect of antidepressant black-box warning on time to switch to antipsychotics among previous antidepressant users. **METHODS:** Information from the 2003–2004 Medicaid Analytic eXtract (MAX) data from Texas, released by Centers for Medicare & Medicaid Services (CMS), were used in the study. Children aged 6–18 years and diagnosed with depression (ICD 9-CM: 293.xx, 296.xx, 298.xx, 300.xx, 301.xx, 309.xx, 311.xx) were identified. To assess the impact of FDA public health advisory on antidepressants released in March 2004, patients on antidepressants in February 2004 were considered to be the cases while those in February 2003 were the controls. Medication switch was operationally defined as the initiation of an antipsychotic prescription within 30 days before the end of the previous antidepressant prescription. A multivariable Cox proportional hazard model, adjusted for demographic factors and antidepressant drug classes, was used to examine the association between black box warning and time to switch to an antipsychotic among the previous antidepressant users. **RESULTS:** There were 14,457 children between 6–18 years, diagnosed with depression in 2003, and 23,694 in 2004. Of these patients, 1646 were identified as cases affected by black box warning and 1714 were identified as controls. The most commonly prescribed antidepressant was sertraline in both 2003 and 2004. FDA public health advisory on antidepressants was found to be significantly increase the time to switch from antidepressants to antipsychotics [HR = 1.413; 95% Confidence Interval (CI): 1.256–1.589]. The shortest time to switch was found among Hispanics [HR (vs. Whites) = 0.851 (95% CI: 0.749–0.967)]. No statistically significant association was found between other factors and medication switch. **CONCLUSIONS:** FDA public health advisory on antidepressants was not found to be associated with lesser time to switch to antipsychotics. Further studies are required to examine treatment discontinuation and augmentation, and switching to other medications resulting from black box warning on antidepressants.

PMH61

THE EFFECTS OF ANTIDEPRESSANT STEP-THERAPY PROTOCOLS ON PHARMACEUTICAL AND MEDICAL UTILIZATION AND EXPENDITURES

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OBJECTIVES: This study examined the effects of step therapy for antidepressants on prescription drug utilization and spending and other medical care utilization and spending. **METHODS:** Study population employers who had implemented step therapy were compared to employers without step therapy using a pre/post design. Data were from the 2003 through 2006 MarketScan Research database, and the study sample consisted of employees and dependents who used antidepressants (n = 15,552 patients whose employer implemented a step therapy protocol; and n = 45,244 patients in the comparison group without step therapy). Multivariate generalized estimating equation models were used to estimate the effects of step therapy on medical and prescription drug spending and utilization while controlling for important covariates and adjusting for clustering by patient. **RESULTS:** The effects of step therapy on the number of antidepressant days supplied per antidepressant user was characterized by an immediate drop in the number of antidepressant days supplied after implementation (coefficient –0.061, $p < 0.001$). However, the number of antidepressant days supplied grew with time (coefficient 0.014 per quarter, $p < 0.001$), and, 5 quarters after implementation of step therapy, the number of antidepressant days supplied in step therapy plans began to exceed the days supplied in comparison plans (i.e., in the fifth quarter after implementation the combined effect is $-0.061 + 5*0.014 = 0.009$). For antidepressant users, step therapy was associated with an increase in outpatient office visits and inpatient admissions and the increase remained relatively constant each quarter after step therapy began. Step therapy was also positively associated with the number of emergency room visits and the increase in emergency room visits grew with the amount of time elapsed since step therapy was implemented. **CONCLUSIONS:** Rather than just shifting patients to lower cost antidepressants, step therapy may have the unintended effect of reducing overall antidepressant use and increasing medical care use and costs.

PMH62

PREDICTORS OF OUTPATIENTS VISITS AND EMERGENCY ROOM VISITS IN PATIENTS WITH EARLY PSYCHOTIC ILLNESS

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OBJECTIVES: To predict health care utilization in patients after the first episode of psychosis. **METHODS:** This analysis utilized data from the CAFE study, a 52-week randomized, double-blind, flexible-dose, multicenter study of patients with early psychotic illness assigned to treatment with olanzapine, quetiapine, or risperidone. From the study population, a subgroup of 179 patients stable at 12 weeks (PANNST, 4 and Calgary, T9), was selected for further analysis. Socio-demographic, disease-related, psychosocial factors and neurocognition were measured and their association with patient health care utilization determined. Neurocognitive composite scores were calculated at 0, 12 and 52 weeks from the neurocognitive battery (CATIE and BACS), converted to standardized Z-scores and divided into tertiles. No drug-related analysis was preformed. Poisson regression, Negative Binomial, Zero-inflated Negative Binomial models were used to identify significant predictors of resource utilization. **RESULTS:** The mean age of patients was 25.6–6.9 years. During study period, 44% of patients had any ER visit and 75% any outpatient visit. Significant multipliers (r) of the expected number of outpatient visits, in addition to regularly scheduled visits, after 12 weeks included: any previous outpatient visits ($r = 3.72$, $p < 0.01$), age ($r = 0.965$ per year age, $p = 0.02$), any abnormal movements ($r = 6.78$, $p = 0.04$), and baseline depression ($r = 1.167$ per point on Calgary, $p < 0.01$). Significant multipliers of the number of ER visits after 12 weeks included: any previous ER visits ($r = 5.22$, $p < 0.01$), neurocognition ($r = 0.46$, 1st Tertile vs 3rd Tertile, $p = 0.01$), and alcohol dependency ($r = 2.19$, $p = 0.04$). **CONCLUSIONS:** The utilization of additional outpatients and ER services for patients after first episode of psychosis is associated to a large extent by previous use of health care service, drug/alcohol dependency, depression and cognition. The strength of these relationships is greater than the impact of illness severity.

PMH63

EFFECTS OF FISCAL INCENTIVES AND SOCIOECONOMIC FACTORS ON ANTIDEPRESSANT ADHERENCE

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OBJECTIVES: Patient adherence to pharmaceutical therapy is an important factor in the successful treatment of depression. Previous research has shown anti-depressant medication adherence associated with patient age, gender, and medical history; physician specialty; and practice patterns. Socioeconomic factors and fiscal incentives stemming from health plan benefit designs have also been hypothesized to impact adherence. In this study, we examined how patient, physician, and health plan benefit design characteristics impact compliance and persistence, two common measures of adherence. **METHODS:** Retrospective database analysis among patients receiving at least one prescription for a selected anti-depressant (duloxetine, venlafaxine XR, escitalopram, sertraline, paroxetine, fluoxetine, citalopram, and/or bupropion) between October 1, 2004 and September 30, 2005. The study cohort included individuals, age 18–64, with a recorded depression diagnosis code within 6 months of the initial index drug prescription (n = 126,889) and continuous benefit coverage pre- and post-index date (first recorded prescription date for the index drug). Compliance was measured as percentage of patients with 365-day medical possession ratio >/= 80%; persistence, as days on therapy (DOT) with index medication. Predictors of compliance were assessed with a logistic regression model; persistence, with a Cox Proportional Hazards model. **RESULTS:** Predictors of lower compliance included African-American race, index drug initiation as second or higher line of therapy or at subtherapeutic dosing levels, psychotropic polypharmacy, comorbid pain diagnoses, and co-pay level (95% confidence intervals for odds ratios all >1). Predictors of higher compliance included older than 45, more than high school education, income >$100K, and comorbid anxiety (95% confidence intervals for odds ratios all >1). Similar results were obtained when assessing persistence instead of compliance. **CONCLUSIONS:** When possible, comparisons of adherence to alternative antidepressant medications should be adjusted for elements of benefit design, socioeconomics, patient demographics, and physician specialty and treatment patterns.

PMH64

MEASUREMENTS OF ADHERENCE TO ANTI-DEPRESSANT MEDICATIONS

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OBJECTIVES: Health plans often conduct analysis of patient adherence to alternative anti-depressant options using only pharmacy data. This study assesses how various factors identified on medical claims and pharmacy data records impact compliance, a common measures of adherence. **METHODS:** Retrospective study of initiators on selective serotonin and serotonin-norepinephrine reuptake inhibitors (SSRIs and SNRIs) during 2005. Study patients (n = 251,934) were continuously eligible 6 months before and 12 months after initiation on their index medication (duloxetine, venlafaxine XR, citalopram, escitalopram, fluoxetine, paroxetine, or sertraline). Compliance was defined as percentage of patients with 365-day medical possession ratio ≥80%. Analysis was based on chi-square tests and logistic regression. All reported differences were statistically significant at p lt 0.01. Confidence intervals for all reported odds ratios were significant at the 95% level. **RESULTS:** Across all SNRI patients, compliance was the same for venlafaxine XR and duloxetine (36%). Among SNRI patients with diagnosed MDD, however, compliance was greater for duloxetine (44%) than venlafaxine XR (41%). Across all SSRI patients, compliance was highest for citalopram (29%), lowest for escitalopram (26%). Among SSRI patients diagnosed with MDD, however, compliance was highest for those on paroxetine (33%), lowest on citalopram (29%). Significant predictors of compliance based on pharmacy claims data among MDD patients included prior use of antidepressants (OR = 1.72) and initial dosing at sub- or super-therapeutic levels (OR = 0.85 and 0.92, respectively). Significant predictors based on medical claims data included recent visits to a mental health specialist (OR = 1.21), a co-morbid diagnosis of GAD (1.20), and the presence of co-morbid baseline pain (OR = .85). **CONCLUSIONS:** Measures of medication compliance may be impacted by a number of factors, including patient characteristics, medical history, and physician specialty. Adherence analysis should adjust for relevant confounders identified in medical claims, as well as pharmacy data records.